

COAL LIQUEFACTION WITH SELECTIVE HEAVY RECYCLE. C. J. Kulik, H. E. Lebowitz, and W. Weber. Electric Power Research Institute, 3412 Hillview Avenue, P.O. Box 10412, Palo Alto CA 94303.

Earlier EPRI programs have shown the effects of recycling a light vacuum bottoms (so called "Light SRC") stream as part of the solvent for coal liquefaction. The previous work showed that the Light SRC recycle resulted in improved performance, particularly at relatively low temperatures, below 800°F. The previous work consisted of comparatively short runs in which the recycle streams were not equilibrated; the ash separation and vacuum bottoms fractionation were not integrated with the coal liquefaction. The results were thus somewhat tentative.

Several runs have now been completed at the Wilsonville 6 ton per day coal liquefaction pilot plant which substantially confirm the previous findings, and add interesting data regarding the scale-up from semi-continuous to continuous operation. This paper will discuss the pilot plant results and relationship between the two scales of operation.